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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/880,263	06/13/2001	Evert Kramer	FA0944 US NA	5376

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EXAMINER

SHOSHO, CALLIE E

ART UNIT PAPER NUMBER

1714

DATE MAILED: 01/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/880,263	Applicant(s) KRAMER ET AL.	
	Examiner Callie E. Shosho	Art Unit 1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>9/10/01</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-18 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

(a) Claim 1 recites, in step a, that the binder and resin are mixed at "elevated temperature". The scope of the claim is confusing because it is not clear what is meant by "elevated". What temperatures are encompassed by this phrase? Clarification is requested.

(b) Claim 1 recites, in step c, "discharging the process mixture from the extruder and adding further organic or inorganic solvents and optionally additional components of the coating composition and discharging the process mixture from the extruder". The scope of the claim is confusing because the phrase states that the mixture is discharged from the extruder twice. It is not clear how the mixture is discharged from the extruder twice, i.e. both before and after adding further solvent. Is the mixture discharged from the extruder followed by adding further solvent or is the further solvent added followed by extruding the mixture? Clarification is requested.

(c) Claim 8 recites that "appropriate" crosslinking binders are fed into the process mixture. The scope of the claim is confusing because it is not clear what is meant by "appropriate" or what binders are encompassed by this phrase. Clarification is requested.

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(d) Claim 10, which depends on claim 1, recites the limitation "the molten binders" in 2. There is insufficient antecedent basis for this limitation in the claim given that there is no disclosure of molten binders in claim 1.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-3, 5-10, and 14-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Koenraadt et al. (U.S. 2003/0092799).

Koenraadt et al. disclose process for preparing liquid coating comprising mixing binder resin with pigment and additives in first stage of extruder at elevated temperature, then introducing water and additional constituents such as crosslinkers and dispersant, i.e. emulsifier, in the following stages wherein the temperature is lowered, then discharging the process mixture from extruder while adding additional liquid, followed by homogenizing the mixture in high shear mixture wherein temperature is decreased before mixing. It is disclosed that binder is added in either solid or molten, i.e. viscous, state. It is further disclosed that the extruder

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comprises different zones that heat or cool the process mixture. While there is no disclosure that the viscosity of the process mixture is reduced upon addition of the water, it is disclosed that the amount of water is controlled in order to obtain coating with desired temperature and viscosity. Further, given that water is added to the mixture of binder and pigment, it is clear that the addition of water would inherently reduce the viscosity of the solid mixture (paragraphs 14-19, 24, 27-28, 30, 33-34, 36-38, 55-57, and 61 and claim 13).

In light of the above, it is clear that Koenraadt et al. anticipate the present claims.

5. Claims 1-2, 4, 9, 11-12, 14, and 16-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Larson et al. (U.S. 5,017,451).

Larson et al. disclose continuous process for preparing liquid coating comprising introducing resin, i.e. binder, and pigment into extruder which melts the resin and disperses the pigment in the resin to form molten, i.e. viscous, blend at 80-120 C, then introducing solvent to form dispersion at 110-140 C, then introducing dispersion into high shear cooling apparatus at 100-120 C as well as adding additional liquid to form liquid coating. It is further disclosed that the extruder comprises heating jackets. Additionally, metal particles, i.e. effect pigments, can also be added (col.2, lines 35-58, col.3, lines 4-8, 9-14, 22-33, and 49-52, col.4, lines 7-19 and 65-68, col.5, lines 7-9, col.8, lines 59-68, and col.9, lines 51-53).

In light of the above, it is clear that Larson et al. anticipate the present claims.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Choudhery et al. (U.S. 2003/0176564) disclose extrusion process wherein polymer and pigment are metered into extruder wherein the polymer is melted. As the material passes through the extruder, aqueous medium is injected along with dispersant. The dispersion then passes through cooling zone. However, there is no disclosure of discharging the dispersion from the extruder and adding further solvent or any disclosure of homogenizing dispersion in high shear mixture as required in the present claims.

Lundgard et al. (U.S. 2002/0074681) disclose process comprising extruding in extruder polymer to render polymer molten with pigment, exiting the mixture from the extruder, and then adding liquid.

Okada et al. (U.S. 6,521,679) disclose process for producing polyester aqueous dispersion comprising melt kneading polyester followed by adding water to form aqueous dispersion. However, there is no disclosure of discharging the dispersion from the extruder and adding further solvent or any disclosure of homogenizing dispersion in high shear mixture as required in the present claims.

Akiyama et al. (U.S. 4,160,752) disclose process for preparing polymer composition comprising mixing pigment into molten resin, emulsifying mixture with water, and then adding latex. However, there is no disclosure of extruder or any disclosure of homogenizing mixture in high shear mixture as required in the present claims.

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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 571-272-1123. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Callie E. Shosho
Primary Examiner
Art Unit 1714

CS
1/2/04